

NASA TECH BRIEF



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Tracer of Electrical Conduit or Pipes

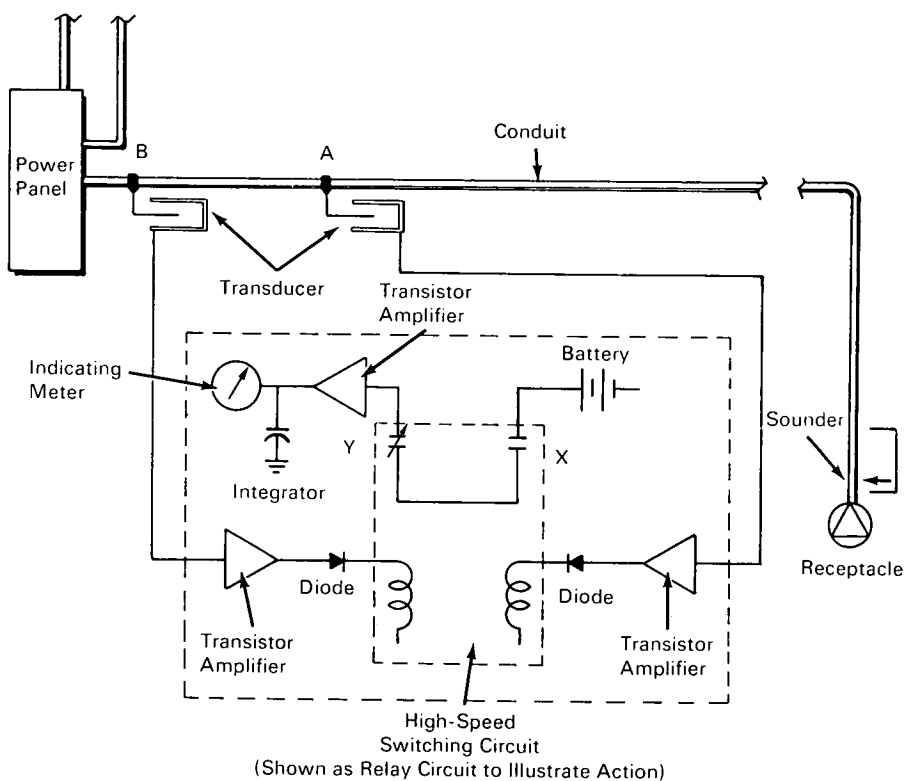


Fig. 1. Operation of the Device

The problem:

Development of a simple method for identifying the two ends of a conduit (or pipe), traversing an inaccessible area, without cutting of the current.

The solution:

A novel device (Fig. 1) matches the ends of a buried line quickly and easily.

How it's done:

Two transducers A and B, linked to a small battery-powered unit (Fig. 1), are clipped about 1 foot apart on the initial length of each conduit in turn near the power panel, B being closer to the panel than is A. A small battery-powered sounder is set on the final end of the conduit, near the receptacle.

(continued overleaf)

When A and B are clipped to the right conduit the signal from the hammer reaches A (1 foot from B) 60 μ sec before it reaches B. The signal from transducer A is amplified and rectified and closes circuit X; at this point the battery sends a signal to the indicating device. Sixty microseconds later the B pulse opens circuit Y. When each sound wave ceases (after each hammer strike), circuit Y closes. The integrator accumulates the pulses and gives a steady reading on the meter when both ends of one conduit are tapped.

Any metal pipe or duct may be traced in this way. Bursts of audiotone may be used instead of a hammer.

Note:

This Tech Brief is complete in itself. No additional information is available.

Patent status:

No patent action is contemplated by NASA.

Source: R. R. Peck of
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